

## CALIFORNIA ENERGY COMMISSION

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Stephen O'Kane  
AES Southland, LLC  
690 Studebaker Road  
Long Beach, CA 90803

October 2, 2012

California Energy Commission

**DOCKETED****12-AFC-02**

TN # 67433

OCT 02 2012

Regarding: **HUNTINGTON BEACH ENERGY PROJECT (12-AFC-02)**  
**Staff's Data Requests, 1 through 72**  
**Coastal Commission Data Request**

Dear Mr. O'Kane,

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

These data requests, numbered 1 through 72, are being made in the technical areas of Air Quality, Biological Resources, Cultural Resources, Public Health, Socioeconomics, Soil and Water, Traffic and Transportation, Transmission System Engineering, Visual Resources, Waste Management, and Worker Safety and Fire Protection. Following staff's data requests, is a comment letter from the California Coastal Commission requesting additional data. Written responses to the enclosed data requests are due to the Energy Commission staff on or before November 2, 2012.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to the Committee and me within 20 days of receipt of this notice. The notification must contain the reasons for the inability to provide the information or the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions regarding the enclosed data requests, please call me at (916) 654-4640.

Sincerely,

Felicia Miller  
Siting Project Manager

Enclosure (Data Request Packet)

cc: Docket (12-AFC-02)  
POS List

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**HUNTINGTON BEACH ENERGY PROJECT  
(12-AFC-02)**

**Energy Commission Staff's Data Requests 1-72**

**Coastal Commission Data Requests**

**October 2, 2012**

**Technical Area:** Air Quality  
**Author:** Tao Jiang

## **AIR QUALITY PERMIT APPLICATION BACKGROUND**

The proposed project will require a Preliminary Determination of Compliance and a Final Determination of Compliance from the South Coast Air Quality Management District (SCAQMD or "District"). These documents will contain permit limits that will be integrated into the staff analysis. Therefore, staff will need copies of all correspondence between the applicant and the District in a timely manner in order to stay up to date on any permit issues that arise prior to completion of the Preliminary or Final Staff Analysis.

### **DATA REQUEST**

1. Please provide copies of all substantive District correspondence regarding the permit application to the District, including e-mails, within one week of submittal or receipt. This request is in effect until the final Commission Decision has been recorded.

## **BACKGROUND**

AFC appendix 5.1A (Construction Emission Calculations) and 5.1B (Operational and Commissioning Emissions Calculations) are used to document emissions calculations. Staff needs the original spreadsheet files of these estimates with live, embedded calculations to complete their review.

### **DATA REQUEST**

2. Please provide the spreadsheet versions of Appendix 5.1A and 5.2B worksheets with the embedded calculations live and intact.

## **MISSING METEOROLOGY DATA BACKGROUND**

As indicated in the AFC (page 5.1-20), the surface meteorology data used for the project modeling have been compiled and preprocessed by the District, and directly downloaded from the District website. However, staff noticed the current meteorology files have a high percentage of missing data, especially for years 2005 and 2006. Staff usually accepts a maximum of 10 percent missing meteorology data, which is consistent with EPA guidance. The missing data percentage is 20.15 percent for 2005, 19.91 percent for 2006, and 9.42 percent for 2007 respectively.

### **DATA REQUESTS**

3. Please verify that the currently-used meteorology files with high missing data percentages have been approved by the District to model project impacts. If not, please specify which substitute meteorology station or data substitution procedure is approved for use by the District.

4. If the District directs the applicant to use an alternative data set, please provide updated construction and operation air quality modeling analyses based on the new meteorology data as approved by the District.

## **CONSTRUCTION NO<sub>2</sub> MODELING BACKGROUND**

NO<sub>2</sub> modeling for the construction phase shows that the increments from the project for both 1-hour impact (591 µg/m<sup>3</sup> for both the state and the federal 1-hour ambient air quality standards) and annual impact (155 µg/m<sup>3</sup>) are above corresponding ambient air quality standards. Staff believes a more refined modeling analysis is required. For example, the reanalysis should use the OLM or PVMRM option. In addition, the 1-hour NO<sub>2</sub> modeling files in the CD assume 100 percent conversion of NO<sub>x</sub> to NO<sub>2</sub> and the resulting impact from project emissions, without background, is as high as 3722 µg/m<sup>3</sup> in year 2006. This value was apparently reduced to 591 µg/m<sup>3</sup> using a SCAQMD adjustment value (called the "SCAQMD localized significance threshold methodology") and this reduced level was reported in Table 5.1-27.

## **DATA REQUESTS**

5. Please provide the details showing how the 591 µg/m<sup>3</sup> value was derived. This should include the processing file for the application of SCAQMD localized significance threshold methodology if it is used in the updated modeling.
6. Please conduct a more refined NO<sub>2</sub> modeling analysis for the construction phase to evaluate compliance with the NO<sub>2</sub> ambient air quality standards.

## **COMMISSIONING MODELING BACKGROUND**

The AFC does not evaluate annual impacts during the commissioning phase with subsequent commercial operation of the project. Although the commissioning phase is expected to be completed within 180 calendar days, annual impacts during the commissioning year are expected to be higher than those during a normal operation year, which may trigger the need for additional mitigation measures and emission offsets. Staff needs to evaluate the commissioning annual impacts and determine compliance with the corresponding ambient air quality standards.

## **DATA REQUEST**

7. Please provide air quality modeling for the annual impacts during the commissioning phase and determine compliance with the annual ambient air quality standards.

## **CUMULATIVE AIR QUALITY IMPACTS BACKGROUND**

8. The AFC (Section 5.1.7 and Appendix 5.1F) describes the methodology for the cumulative effects analysis but does not include the analysis because a project list had not been provided by the District at the time the AFC was prepared. The

cumulative analysis should include all reasonably foreseeable projects within a 6-mile radius, i.e. the projects that have received construction permits but are not yet operational, and those that are in the permitting process or can be reasonably expected to be in permitting in the near future. A complete cumulative impacts analysis should identify all existing and planned stationary sources that affect the baseline conditions and consider them in the modeling effort.

## **DATA REQUESTS**

9. Please provide a copy of the District's correspondence regarding existing and planned cumulative sources located within six miles of the project site.
10. Please provide the list of sources to be considered in the cumulative air quality impact analysis for staff review and approval.
11. Please provide the cumulative modeling and impact analysis, including HBEP and the other projects approved by staff.

## **EMISSION OFFSETS BACKGROUND**

The emission offsets described in the AFC only include those for NO<sub>x</sub> and SO<sub>x</sub> emissions. The South Coast Air Quality Management District (SCAQMD) adopted Rule 1325 on June 3, 2011, which requires PM<sub>2.5</sub> emission increases to be offset at an offset ratio of 1.1:1 if the rule is triggered. In addition, the Energy Commission requires CEQA mitigation for increases of all nonattainment criteria pollutants and their precursors at a ratio of at least 1:1 regardless of whether a rule is triggered.

## **DATA REQUESTS**

12. Please discuss whether or not HBEP triggers Rule 1325. If so, please provide PM<sub>2.5</sub> offset strategy to meet this rule. The response to this data request should include any changes in assumed capacity factor, as requested in the data request 23.
13. Please provide the offset strategy for all nonattainment criteria pollutants to meet the Energy Commission's CEQA mitigation requirements. The response to this data request should include any changes in assumed capacity factor, as requested in the data request 23.

## **EMERGENCY FIRE WATER PUMPS OPERATION BACKGROUND**

The AFC indicates that the HBEP intends to continue to use two existing 275-horsepower diesel-fired emergency fire water pumps installed during the existing Huntington Beach Generating Station's Unit 3 and 4 retooling project in 2001. Since these pumps were permitted in 2001, staff does not think these old pumps can comply with current California Air Resources Board's (ARB's) Airborne Toxic Control Measure for Stationary Compression Ignition Engines. This measure was adopted as part of California's Diesel Risk Reduction Plan in 2004 and updated periodically through 2011.

California Code of Regulations, Title 17, Section 93115.6 (a)(4) addresses allowable emissions rates for diesel engines driving fire pumps. In addition, the fire pumps are not included in the current HBEP air quality analysis. Staff disagrees that operation of the fire pumps are adequately reflected in the background conditions measured at a monitoring station located a few miles away due to the low stack height and resulting short plume length of fire pump emissions.

#### **DATA REQUESTS**

14. Please determine whether the two emergency fire water pumps meet the limits specified in Table 2 of Section 93115.6 (a)(4) or need to be retrofitted or completely replaced to meet these applicable requirements.
15. Please submit any correspondence to or from SCAQMD regarding the District's determination on the fire pump engine permitting.
16. Please describe the operating schedule and emissions of the updated emergency fire pumps, and modify the air quality modeling to include emissions from the updated fire pumps.
17. Please update the emissions reduction credits (ERCs) as necessary due to the inclusion of fire pump emissions.

#### **STEAM TURBINE BYPASS SYSTEM BACKGROUND**

According to AFC table 2.6-1, the HBEP will use a steam turbine bypass system which allows both CTG/HRSG trains to operate at base load with the steam turbine out of service. Staff needs more details to understand the operation of this system, especially assurances that this will not bypass the SCR/CO catalyst, as well as the effect on emissions.

#### **DATA REQUESTS**

18. Please provide the detailed description of the steam turbine bypass system.
19. If the operation of the steam turbine bypass system will affect emissions and project heat rates and capacity factors, please describe how the use of the bypass system has been considered in the different operating scenarios and corresponding emissions and heat rate estimates and annual capacity factors.

#### **THERMAL EFFICIENCY AND HEAT RATES BACKGROUND**

Section 3.2 of Appendix 5.1 D includes a GHG Best Available Control Technology (BACT) analysis that concludes the proposed configuration is GHG-BACT for this project. Figure 4 in this section compares heat rates of HBEP with those of alternative design but does not give the details of the load points.

## **DATA REQUESTS**

20. Page 3-6 of Section 3.2 indicates that duct burners would be use to "... close the production gap between starting the second and third combustion turbines of a power block ... " However, Energy Commission staff was not able to replicate Figure 4 using data in the AFC. Please indicate which configurations represent each of the load/efficiency data points in Figure 4 of Section 3.2 of Appendix 5.1D.
21. Please indicate how Figure 4 would change if duct burners were not used to close the production gap as stated on page 3-6.
22. Please indicate if the proposed design represents the configuration with the best heat rate. If not, please describe more fully why design configurations with a better heat rate cannot be used.

**Technical Area: Biological Resources**  
**Author: Anwar Ali, Ph.D.**

## **BACKGROUND**

The AFC (Section 5.2.3.3.1) states that the critical load for atmospheric nitrogen deposition into coastal wetlands is difficult to establish because wetlands subject to tidal exchange have open nutrient cycles. It further states that nitrogen loading in wetlands is often affected by sources other than atmospheric deposition. In addition, it states that air pollution controls limit emissions of oxides of nitrogen and that RECLAIM puts a cap on region wide NO<sub>x</sub> emissions. The section concludes that the HBEP nitrogen deposition impacts are not expected to contribute significantly to nitrogen loading on coastal salt marshes. However, there is no discussion of the relative location of the proposed project and sensitive habitats that could be affected by nitrogen emissions from HBEP nor is there a quantitative analysis of nitrogen deposition impacts.

Background data that could be used in conjunction with nitrogen deposition modeling for the HBEP could be established using available resources such as the California Energy Commission publication **Assessment of Nitrogen Deposition: Modeling and Habitat Assessment** (CEC-500-2006-032, March 2007). However, since no nitrogen deposition modeling was performed for the HBEP, this step is still needed and the qualitative information provided in the AFC does not support the applicant's conclusion that nitrogen deposition from HBEP emissions would have no impacts on coastal salt marshes. Energy Commission staff believes that nitrogen deposition resulting from emissions from the proposed HBEP, namely nitrogen oxides (NO<sub>x</sub>) and ammonia (NH<sub>3</sub>) could have negative impacts on biological resources and that a quantitative analysis of such impacts is needed.

Impacts of excessive nitrogen deposition to plant communities include direct toxicity, changes in species composition among native species and enhancement of non-native invasive species. The increased dominance and growth of invasive annual grasses is especially prevalent in low-biomass vegetation communities that are naturally nitrogen-limited, such as salt marshes. Invasive non-native vegetation, enhanced by atmospheric nitrogen deposition, affects these species by outcompeting them for space, sunlight, moisture, and nutrients. The salt marshes fringing estuaries intercept a substantial part of the land-derived nitrogen load and thus protect other components of estuaries from eutrophication; loss of these fringing marshes would therefore have wider consequences. Additionally, southern coastal salt marsh, southern coast live oak woodland, and southern dune scrub located in the vicinity of the project site could potentially be impacted by nitrogen deposition contributed by the HBEP. The anticipated nitrogen emissions may contribute to the ongoing (cumulative) degradation of sensitive species habitat located near the project site.

In order to assess impacts to nitrogen-sensitive biological resources, staff requires additional information on nitrogen deposition as established by proper modeling of nitrogen emissions resulting from the HBEP.



## DATA REQUESTS

23. Please quantify the existing baseline total nitrogen deposition rate in the vicinity of the HBEP in kilograms per hectare per year (kg/ha/yr). The geographical extent of the nitrogen deposition mapping should be directed by the results, i.e. extend geographically to where the deposition is considered below any stated threshold of significance for vegetation communities. Conduct a literature review to identify appropriate thresholds. Thresholds for nitrogen deposition by vegetation type are available within the March 2007 California Energy Commission PIER report, titled "Assessment of Nitrogen Deposition: Modeling and Habitat Assessment," available at: <http://www.energy.ca.gov/2006publications/CEC-500-2006-032/CEC-500-2006-032.PDF>, and the May 2007 California Energy Commission PIER report, titled "Impacts of Nitrogen Deposition on California Ecosystems and Biodiversity," available at: <http://www.energy.ca.gov/2005publications/CEC-500-2005-165/CEC-500-2005-165.PDF>. Please include references and guidelines used in your baseline analyses.
24. Please use AERMOD or an equivalent model to provide an analysis of impacts due to total nitrogen deposition from operation of the HBEP. The analysis should specify the amount of total nitrogen deposition in kg/ha/yr at the Huntington Beach Wetlands Conservancy's Coastal Marsh Restoration Complex, the U.S. Army Corps of Engineers (USACE) Salt Marsh Restoration project, the Talbert Nature Preserve, the Bolsa Chica Ecological Reserve, and the Seal Beach National Wildlife Refuge and any other special status habitats, vegetation types, and critical habitat for wet and dry deposition. Please provide the complete citation for references used in determining this number
25. Please provide an isopleth graphic over USGS 7.5-minute maps (or equally detailed map) of the direct nitrogen deposition rates caused by the project. This will be a graphical depiction of the projects' nitrogen deposition.
26. Please provide a comprehensive cumulative impact analysis for the direct nitrogen deposition in kg/ha/yr caused by HBEP. Provide an isopleths graphic over USGS 7.5-minute maps of the direct nitrogen deposition values in the cumulative analysis and specify the cumulative nitrogen deposition rate in kg/ha/yr at any affected special status habitat, vegetation type, or critical habitat. The geographical extent of the cumulative nitrogen deposition mapping should be directed by the results, i.e. extend geographically to where the deposition is considered below any stated threshold of significance.

## BACKGROUND

The HBEP will be located adjacent to the Huntington Beach Wetlands Conservancy Coastal Marsh Complex and the USACE Salt Marsh Restoration Project. These sensitive ecological reserves support several special-status wildlife species and other sensitive biological resources.

The applicant delineated wetlands as defined by the California Coastal Act, Section 30121: *"lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed*

*brackish water marshes, swamps, mudflats, and fens*"( AFC section 5.2.2.2). However, the California Coastal Commission (CCC) has also adopted a one-parameter approach for delineating wetlands as stipulated in Cal. Code Regs., tit. 14, § 13577, which designates the following features to define the upper limits of wetlands:

- The boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover;
- The boundary between soil that is predominantly hydric and soil that is predominantly nonhydric; or
- In case of wetlands without qualifying vegetation (including unvegetated wetlands) or soil, the boundary is between land that is flooded or saturated at some time each year and land that is not.

The delineation presented by the applicant does not provide a full assessment of the direct and indirect temporary or permanent impacts to the wetlands under the jurisdiction of the USACE and CCC. Section 5.2.3.2.5 of the AFC (page 5-2-35) determined that HBEP construction would not cause loss or fill of any wetlands. However, as depicted in Figure 5.2-2bR (Attachment DA5.2-5, AFC Supplement: Response to Data Adequacy Review), the proposed project has the potential to affect Estuarine and Marine Wetlands which are jurisdictional to the USACE and CCC.

## **DATA REQUESTS**

27. Please provide a wetland delineation using the guidelines of the USACE (1987 USACE Wetlands Delineation Manual) and guidelines of the Cal. Code Regs., tit. 14, § 13577 to assess direct or indirect temporary impacts to wetlands adjacent to the power plant site and laydown areas.
28. Please provide a detailed discussion of measures to avoid, minimize and mitigate any potential impacts of the proposed project on the jurisdictional wetlands.
29. If it is determined that the project would impact wetlands under the jurisdiction of USACE, please provide contact information for USACE representative (name, title, phone number, address and email address, if known) and copies of all records of communication with the agency.

## **BACKGROUND**

Several sensitive ecological reserves and wetland preservation sites are adjacent to the project site, which include the Huntington Beach Wetlands Conservancy's Coastal Marsh Restoration complex, the USACE Salt Marsh Restoration project, and the Talbert Nature Preserve. The Huntington Beach Wetlands Conservancy's Coastal Marsh Restoration complex includes four units: Newland Marsh, Magnolia Marsh, Brookhurst Marsh, and Talbert Marsh. Section 5.2.2.2 of the AFC (page 5.2-4) states that several special-status wildlife species have been reported or observed in these wetlands, which support a breeding population of Belding's savanna sparrows. Additionally, the wetland complex provides foraging habitats for western snowy plover, California brown pelicans and California least tern.

The applicant reported that no sensitive species were observed within the proposed power plant site and laydown area during the site visit and survey on September 29, 2011 and August 1, 2012; respectively. However, these ecological reserves contain

essential habitats supporting several sensitive species, which would likely occupy these sites during HBEP construction and demolition activities. Avian species adapted to disturbed urban areas, such as burrowing owl, might also use the construction and laydown areas for foraging, breeding and nesting activities. In addition, the HBEP occurs along the Pacific Flyway, which serves as a major stopover and wintering area for waterfowl and migrating shorebirds.

Section 5.2.3.3.3 of the AFC (page 5.2-36) acknowledges that noise from site preparation, construction, and demolition, could temporarily discourage wildlife from foraging and nesting in the coastal wetland habitat immediately adjacent to the project area. This section also states that the expected loudest composite noise levels from HBEP are approximately 70 dBA at the HBEP fenceline, which will result in a noise level of 63 dBA at 400 feet from the fenceline. Bird nesting habitat is present in the Magnolia Marsh immediately adjacent to HBEP. However, the AFC concludes that noise from construction, demolition, and operation of the HBEP would not adversely affect wildlife, because wildlife would usually become accustomed to routine background noise and noise associated with the existing industrial uses including the existing Huntington Beach Generating Station and highway traffic. Staff anticipates that noise generated during construction, and operation, and demolition of the power plant facility would have an impact on sensitive biological resources and noise attributable to the construction of HBEP may be sufficiently high to temporarily discourage birds from nesting in this area. Therefore, staff requires detailed information related to the impacts of noise and on the sensitive biological resources during the construction, demolition, and operation of the proposed project. In addition, the proposed mitigation measures to offset the nighttime and noise impacts associated with the project (section 5.2.5 of the AFC, page 5.2-368) are insufficient and need to be supplemented by specific measures.

## **DATA REQUESTS**

30. Please determine the expected noise levels and the extent and duration of noise and attenuation across the site and into the study area during construction and demolition at all sensitive habitat receptor locations near the project site, especially at the Newland Marsh, Magnolia Marsh, Brookhurst Marsh, Talbert Marsh, Talbert Natural Preserve, and USACE Salt Marsh Restoration project. Also, please include the anticipated plant operational noise levels at the above wildlife receptors.
31. Please include a thorough assessment of the proposed project's anticipated noise impacts and vibratory effects on wildlife as well as feasible avoidance, minimization and mitigation measures to offset the direct and indirect temporary and permanent impacts of elevated noise levels.

## **BACKGROUND**

Section 2C.7.5.4 (AFC Volume 2 Appendix 2C) states that groundwater was observed during exploratory borings at the time of drillings at a depth of approximately 14 feet. The observed groundwater depths are not considered stabilized groundwater depths. The California Geologic Survey Seismic Hazard Zone report for this area indicates that the historic high groundwater in the vicinity of the site is approximately 3 feet below the ground level. Section 2C.7.6.3 also indicated that the preliminary geotechnical evaluation recommends supporting the major improvement structures on deep pile

foundations. The applicant proposes the use of 14-inch diameter pre-cast concrete pile driven to a depth of approximately 30 feet.

The staff anticipates that construction of foundations to support the HBEP structures would require dewatering, which could impact the level of groundwater with consequent impacts on neighboring wetlands.

## **DATA REQUEST**

32. Please determine if any dewatering would be required during the construction of the foundations supporting the HBEP structures and submit a detailed dewatering plan. If the project would involve dewatering, please determine the resultant impacts on the groundwater level and wetlands located near the project site.

## **BACKGROUND**

According to the AFC, HBEP will be constructed entirely within the existing operating Huntington Beach Generating Station site where the vegetation primarily consists of landscaping plants and non-native species that are regularly treated with herbicides and removed as necessary (Attachment DA5.2-5, AFC Supplement: Response to Data Adequacy Review). Section 2C.7.7.1 (AFC Volume 2 Appendix C) also states that the site subgrade preparation and grading would include the complete removal of all vegetation and topsoil. However, it is not clear whether any trees or shrubs at the boundaries of the existing facility would be removed. Resident birds may use these trees and shrubs for foraging and breeding activities.

## **DATA REQUEST**

33. If the proposed vegetation removal would include removal of trees and shrubs, please provide the number, the exact locations, a schedule for vegetation removal activities, and a vegetation restoration plan.

## **BACKGROUND**

The AFC states the HBEP would not contribute to habitat loss because the construction, demolition and operation of the project will occur within the preexisting Huntington Beach Generation Station site and the offsite laydown area is located within the Alamitos Generating Station (Section 5.2.4 of the AFC, pages 5.2-37-38). In addition, the AFC states the HBEP will have a positive effect on the environment because the new facility will eliminate the use of ocean water and produce less emissions and noise.

Staff disagrees with the applicant's overall assessment of the cumulative impacts of HBEP on the biological resources. Sensitive biological resources bordering the project site and other significant regional wetlands and protected areas could be potentially impacted by the HBEP and future proposed projects in the project vicinity. Cal. Code Regs., tit. 20, requires the discussion of "all impacts (direct, indirect, and cumulative) to biological resources from project site preparation, construction activities, plant operation, maintenance, and closure. The discussion shall also address sensitive species habitat impacts from ...and air emissions." Cal. Code Regs., tit. 14, § 15355 also states: 'Cumulative impacts' refers to two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts. Therefore, the cumulative impacts analyses must consider the

impacts of the proposed project together with any incremental effects of other closely related past, present and reasonably foreseeable future projects. Two future projects, the Poseidon Resources Huntington Beach Desalinization Facility and a reservoir proposed by the City of Huntington Beach, are planned in the project area. The anticipated cumulative impacts of these two projects were not included in the overall assessment of the cumulative effects.

#### **DATA REQUEST**

34. Please provide a comprehensive analysis of the cumulative impacts on sensitive biological resources, considering the impacts of the HBEP together with the Poseidon Desalinization project and the City of Huntington Beach reservoir. The cumulative impacts analysis should include schedules of all proposed projects and possible schedule modifications, in addition to all feasible measures that could avoid, reduce, or mitigate any potential cumulative impacts.

**Technical Area: Cultural Resources**  
**Author: Gabriel Roark**

Any responses to these Data Requests containing references to specific archaeological site locations or information, or cultural resources of concern to Native Americans, must be submitted under a request for confidentiality.

## **BACKGROUND**

The proposed Huntington Beach Energy Project (HBEP) would replace the Huntington Beach Generating Station (HBGS), a natural gas-fired electric generation facility on the Pacific Coast. As the proposed project is to occur on and around the site of a relatively large extant power generation facility, there is little likelihood that archaeological resources are present on the ground surface (AES 2012a:5.3-14). Upon review of the Application for Certification (AFC) and discussions with the Applicant and its consultant during a September 28, 2012 site visit, however, staff concludes that construction of the HBEP has the potential to disturb buried archaeological resources. This potential would be eliminated or reduced if the Applicant can clearly demonstrate that excavation would only transpire in fill sediments or that the underlying, native sediments are of a nature that buried archaeological deposits are not expectable. The purpose of this data request is to refine available information about the depths of excavation associated with the proposed project and the character of underlying sediments. With this information, staff can make an informed assessment of buried archaeological site potential.

This data request is put into context with the following discussion of soils and sediments underneath the project site. The project site is occupied by a power plant and is largely paved. The project site sits atop a layer of building foundations, asphalt concrete, aggregate base material, and imported fill sediments of variably thickness. The AFC and supporting documentation state that the project site rests atop 2–3 feet (ft) of fill dirt in the vicinity of the proposed combined-cycle gas turbine Block 1 (AES 2012a:5.8-3; Ninyo & Moore 2011:Boring Logs 1–2, Figure 3). In addition, the AFC reports that prior to the original construction of the HBGS, approximately 8 ft of a natural clay layer was removed from portions of the HBGS and replaced with engineered fill<sup>1</sup> (AES 2012a:5.8-3; AES 2012b:5.3-5; Cardenas et al. 2012:4-3). The underlying natural sediments are late Holocene<sup>2</sup> wind-deposited (eolian) sediments (ca. 4000 B.P.<sup>3</sup>–present) and alluvium or estuarine sediments. Beneath the alluvium or estuarine sediments are marine sediments. These latter two stratigraphic units are inferred to be late Holocene

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<sup>1</sup> Removal of the clay layer apparently was restricted to the areas surrounding the “main building” and “equipment”. The AFC does not report its source(s) of information for removal of the clay and subsequent placement of fill. The AFC is unclear about the identity and location of the “main building” and “equipment”. (AES 2012a:5.8-3; AES 2012b:5.3-5; Cardenas et al. 2012:4-3.)

<sup>2</sup> The Holocene Epoch is a geologic time unit that spans the last 10,000 years. It is preceded by the Pleistocene Epoch, and current archaeological evidence shows that humans have resided in California for the past 12,000 years. The bulk of the archaeological record in California, therefore, would be associated with Holocene-age landforms.

<sup>3</sup> “B.P.” means “before present”, which scientists agree by convention is A.D. 1950, the year in which radiocarbon dating was first accepted as a viable dating method. An age estimate of 4000 B.P. would therefore roughly correspond to the calendar year 2050 B.C.

in age, although Pleistocene age sediments could be encountered with sufficient depth of excavation. (AES 2012a:5.8-6, 5.8-7; Morton 2004; Ninyo & Moore 2011:5.) Age estimates for the stratigraphic units are presently based on standard geologic correlations and have not been refined with the use of radiocarbon or other more precise forms of dating.

Whether the applicant would encounter buried archaeological deposits during project construction depends on several factors, including the depositional character and the ages of the sedimentary deposits that construction would disturb, the presence of buried land surfaces or buried surfaces of ancient soils (paleosols), the duration or stability of any paleosols, the post-depositional character of geomorphic processes in the project area of analysis, and the nature of past human activities in the area. Absent information on a number of these environmental parameters, staff has almost no factual basis to support a reasonably reliable assessment of whether archaeological deposits may be present in the proposed project area.

The AFC does not cite or offer any chronometric data to support the applicant's estimates of the age of the sediments on the project site. Much of the sediment under the engineered fill on the project site is likely to be Holocene in age, although the depth of the contact between Holocene and Pleistocene age sediments is unknown. Geotechnical boring logs for the proposed project indicate a number of stratigraphic breaks or changes within the upper 30 ft of project site sediments. The boring logs and associated geotechnical report (Ninyo & Moore 2011) are not sufficiently detailed to determine whether stratigraphic features such as paleosols are present. The information provided in the AFC and staff analysis do indicate that the proposed project site is in a depositional environment where buried former land surfaces and associated archaeological materials have the potential to be found. Much or all of any such deposition would have occurred within the last 10,000 years. For example, at least one buried prehistoric archaeological site (P-30-1644) has been identified about 11 miles northwest of the project site in a similar, former estuarine setting under 6 ft of fill (Willey 2006). Moreover, between 5450 and 2950 B.P., relatively sedentary (semipermanent) occupations formed around Orange County estuaries (Grenda and Altschul 2002:127). Estuarine and marine sediments, therefore, cannot be taken as indicative of low buried site potential in the project site.

Given the geomorphic context of the proposed project and the known occurrence of at least one prehistoric archaeological site in estuarine sediments such as occur in the project site, knowing the depth of fill on the project site and the planned depths of excavation is critical to staff's analysis of potential impacts on cultural resources. At present, staff cannot develop a reliable analysis of the proposed project's potential effects on archaeological resources, or develop meaningful mitigation measures for any effects that may be found to be significant, absent sound data on the thickness of fill on the project site and the proposed depths of excavation.

## **DATA REQUESTS**

35. Please prepare a written discussion of the sequence of construction at the HBGS and its effects on the sediments underneath the project site. This discussion should include, among other elements:

- a. A chronologically ordered discussion of ground disturbance at the HBGS that was responsible for the removal of the clay layer. The discussion must cite sources of information, such as grading plans, other drawings, or construction memoranda.
  - b. The identity of the “main building” and “equipment” referenced in the AFC.
  - c. Descriptions of the clay layer, any overlying soil, the underlying compact sand layer, and the placed fill. Limitations in the original sources concerning the requested information should be noted in the discussion.
  - d. The depth (thickness) of fill that was placed after the clay layer was removed.
  - e. A map showing the extent of clay removal, drawn to scale at 1 inch = 200 to 400 ft.
  - f. Any profile drawings or excavation logs filed with the original sources of information.
36. Please provide the depth and horizontal extent of excavation associated with the following proposed project facilities.
- a. Excavation to expand the foundations of existing HBGS Units 1–4 to support the new combined-cycle gas turbines (CCGT) in Block 2.
  - b. New CCGT Block 1.
  - c. New control/administrative building.
  - d. New maintenance/warehouse building.
  - e. Relocated gas metering station.
  - f. Floor drains, hub drains, sumps, and piping.
  - g. Bare conductors and ground rods.
  - h. Ammonia tank, spill containment basin, and refilling station.
  - i. Wastewater lift station.
  - j. Fire protection systems, if installed below current grade.
  - k. A-frame dead-end structures and towers comprising the 230-kilovolt electrical transmission tie-in to the Southern California Edison switchyard north of the project site.

Additionally, please indicate the depth of fill that would underlie the proposed CCGT Block 1 after placement of all fill obtained from on- and off-site sources.

This information will assist staff in determining whether the sediments underlying the proposed project site possess characteristics amenable to the preservation of buried archaeological resources.

## REFERENCES CITED

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**Technical Area:** Public Health  
**Author:** Huei-An Chu (Ann)

## **POTENTIAL HEALTH RISK FROM ASBESTOS DURING DEMOLITION BACKGROUND**

In Figure 2.2-2 and Figure 2.2-3 of Application for Certification (AFC), asbestos is listed under the removal of insulation of piping and boiler. Also, page 4 of Appendix 5.14A (Phase I Environmental Site Assessment), Environmental Management Strategies, Inc. (EMS) notes that “the site buildings were constructed prior to 1980; therefore, asbestos-containing building materials and lead based paint may be present on-site.”

Exposure to asbestos and Asbestos Containing Materials (ACM) increases workers’ and residences’ risk of developing lung diseases, including asbestosis, lung cancer, and mesothelioma. Thermal system insulation (formed or spray-on) is the ACM of greatest concern for response and recovery worker exposure. Other materials that may contain asbestos include: vinyl floor tile, home siding and shingles, transite (including cement piping), flame retardant materials (e.g., gloves, curtains) and roof flashing. (Source: <http://www.osha.gov/SLTC/etools/hurricane/building-demolition.html#asbestos>)

In Table 5.1-38, the applicant stated that they will comply with all requirements outlined in South Coast Air Quality Management District (SCAQMD) Rule 1403, which requires the notification and special handling of asbestos-containing materials during demolition activities. In Table 5.16-1 of **Worker Health and Safety** section, Asbestos and Lead Program was listed to control the exposure to asbestos and lead for workers in construction/demolition activities. However, considering the potential risk from exposure to Asbestos Containing Materials (ACM), staff believes that it is also important that the applicant explains how they will comply with the rule and implement the control plan to protect the public health.

## **DATA REQUEST**

37. Please discuss how the applicant intends to comply with the requirements in SCAQMD Rule 1403 regarding the handling, removal and disposal of any asbestos containing materials encountered during decommissioning or construction.

## **SENSITIVE RECEPTORS IN HEALTH RISK ASSESSMENT BACKGROUND**

The Application for Certification (AFC) and appendices to the AFC provided some information on how the applicant conducted their health risk assessment. The potential impacts associated with toxic air emissions from the proposed power plant were addressed in a health risk assessment (Section 5.9 Public Health, Appendix 5.9, and Appendix 5.9A Environmental Data Resources (EDR) Offsite Receptor Report). This health risk assessment was prepared using guidelines developed by OEHHA and ARB, as implemented in the latest version of the HARP (Hotspots Analysis and Reporting Program) model. The EDR Offsite Receptor Report listed all the sensitive receptors including day care centers, nursing homes, schools, hospitals and colleges within 6 miles of the proposed power plant. However, staff was unable to identify these sensitive receptors from discrete grid receptors when using either American Meteorological

Society/Environmental Protection Agency Regulatory Model (AERMOD) or HARP. Staff needs the files of AERMOD and HARP which contain the information on grid id and location of both sensitive receptors and residence receptors to review and verify the applicant's health risk assessment.

#### **DATA REQUESTS**

38. Please provide the input files of data (i.e. the "\*.ROU" files) for AERMOD and HARP which contain the information of sensitive receptors and residence receptors, including grid identification numbers and corresponding locations, so that staff can differentiate them from all other grid receptors.
39. Please provide all other related files to enable staff to replicate the health risk assessment.

**Technical Area:** Socioeconomics  
**Author:** Lisa Worrall

## **CONSTRUCTION WORKFORCE AND SCHEDULE BACKGROUND**

The Socioeconomics section of the Huntington Beach Energy Project (HBEP) Application For Certification (AFC) discusses the construction schedule for the proposed project and Appendix 5.10B presents the construction and demolition personnel by month for the HBEP. When comparing the construction details on page 5.10-9 in the Socioeconomics section of the AFC with the construction schedule presented in Table 5.10B in Appendix 5.10B, several discrepancies were observed. The following data request addresses the discrepancies.

### **DATA REQUEST**

40. The table below presents the project construction details compiled from the two sections of the AFC. Please confirm which are the correct project details (discrepancies shown in bolded text):

	Socioeconomics section, Page 5.10-9	Appendix 5.10B, Table 5.10B
Demolition of Unit 5 (peaker)	Fourth quarter 2014 to end of 2015	Fourth quarter (Nov.) 2014 to fourth quarter (Dec.) 2015
	Not identified	14 months
Construction of Block 1	First quarter 2015 to second quarter 2018	First quarter (Feb.) 2015 to second quarter (June) 2018
	<b>42 months</b>	<b>41 months</b>
Construction of Block 2	First quarter <b>2018</b> to second quarter <b>2020</b>	First quarter (March) <b>2020</b> to second quarter (June) <b>2022</b>
	<b>30 months</b>	<b>28 months</b>
Demolition of Unit 1 & 2	Fourth quarter <b>2020</b> to third quarter <b>2022</b>	Fourth quarter (Oct.) <b>2022</b> to fourth quarter (Sept.) <b>2024</b>
Construction of Building 33 & 34 control building and maintenance	Not identified	Third quarter (Aug.) 2023 to third quarter (Aug.) 2024.
	Not identified	13 months

## **CUMULATIVE IMPACTS BACKGROUND**

The demolition of existing Huntington Beach Generating Station Units 3 and 4 is identified on page 5.10-9 of the Socioeconomics section of the AFC as part of the cumulative impact assessment. The schedule for the planned demolition is identified as occurring between the third quarter of 2015 through the second quarter of 2017, in advance of the construction of Block 2. The following data request would assist Energy Commission staff's analysis of labor requirements of projects in the cumulative impact assessment.

### **DATA REQUEST**

41. Please confirm the demolition schedule for Units 3 and 4 and provide an estimate of the number of workers needed. If available, please report the number of workers needed by month and trade.

**Technical Area: Soil & Water Resources**  
**Author: Mike Conway**

## **BACKGROUND**

State water use policy encourages all feasible means of water conservation (California Public Resources Code, Division 15, Section 25000 et seq.). Staff believes that extended use of freshwater for the Huntington Beach Energy Project operation would not be consistent with the current state water policy that promotes all feasible means of water conservation. In several recent cases project applicants have committed to and funded water use conservation programs that benefit the local water users.

Staff has reviewed the water supply alternatives analysis in the AFC and notes that a somewhat qualitative analysis of recycled water availability and utilization is provided. The AFC indicates supplies from Orange County Water District are currently subscribed and would not be available for project use. The AFC also indicates the treatment and delivery of the OCSO secondary treated wastewater supply that may not be currently economically feasible or environmentally desirable.

Drawing from state law that requires water conservation, and the evolving science and policy decisions at the state and federal level that are limiting the availability of strained supplies from the Delta and Colorado River, staff believes the applicant should address the proposed project freshwater use and evaluate the use of an alternative supply such as recycled water. Staff believes the applicant could fund an existing water conservation program in the region or develop and fund a plan to address project water use if and until an alternative supply becomes feasible.

## **DATA REQUESTS**

42. Please provide a discussion of options or programs that could be developed or supported in the City of Huntington Beach service area that provide water conservation.
43. Please provide a discussion of the funding that would be needed to implement a water conservation plan or program.
44. Please discuss what, if any, approvals may be needed by other agencies to implement a proposed water conservation program.
45. Please discuss under what circumstances the applicant would be willing to convert to an alternative water supply if and when it becomes feasible.

**Technical Area:** Traffic and Transportation  
**Author:** Candace M. Hill

## **HEAVY HAUL ROUTE BACKGROUND**

The AFC Traffic and Transportation analysis states the Huntington Beach Energy Center Project (HBEP) would require both onsite and offsite laydown and construction parking areas. Approximately six acres would be located at the Huntington Beach Generating Station (laydown and construction parking) and 16 acres at the AES Alamitos Generating Station (AGS) in Long Beach for construction laydown (component storage only). Heavy/oversized components would be transported by truck from the Port of Long Beach to the AGS off-site construction laydown area and then from the off-site area to HBEP as depicted on AFC Figure 5.12-3 (Heavy Haul Route). (Pages 5.12-1, 2 and 5.12-13).

The Heavy Haul Transportation Survey (Appendix 5.12B) lists several transportation routes:

- Long Beach to Huntington Beach;
- Vanco rail siding to Huntington Beach;
- Long Beach to Alamitos and;
- Vanco rail siding to Alamitos.

Within these transportation routes, several additional roads have been identified that are not listed in Section 5.12.1.3.1 – Existing Roadway Conditions. The AFC states that since the volume of the heavy/oversize trips for HBEP would be low enough and conducted at night, that a traffic analysis was not conducted for the heavy/oversized routes (Page 5.12-7).

## **DATA REQUESTS**

46. Please specify the number of oversize trips that would occur from AGS to the project site and the hours they would occur.
47. Please submit existing traffic conditions and Level of Service (LOS) and construction LOS for the roads identified in Appendix 5.12B that are not contained in Section 5.12.1.3.1.
48. Please identify any structures such as overhead power lines that would have to be addressed during transport of the heavy/oversized equipment.
49. Please address any turning radius or centerline landscape barriers that may be problematic along these routes.

## **TRUCK ROUTES AND TRANSPORT OF HAZARDOUS MATERIALS BACKGROUND**

The AFC Traffic and Transportation analysis identifies the following truck routes for construction, demolition, and operations:

- Huntington Beach: north/south truck routes near the project site include Golden West Street, Beach Boulevard, Newland Street from Pacific Coast Highway (PCH) to Atlanta Avenue, Magnolia Street from PCH to Garfield Avenue, and Brookhurst Street from PCH to Garfield Avenue. East/west truck routes near the project site include Adams Avenue from Brookhurst Street to Beach Boulevard, Atlanta Street from Newland Street to Beach Boulevard, Hamilton Avenue from Brookhurst Street to Newland Street and PCH (Page 5.12-13).

For transporting hazardous materials, the truck route would be I-405 to Beach Boulevard, south onto PCH and then north to Newland Street (Page 5.12-18).

### **DATA REQUEST**

50. Please clarify if construction trucks would also use I-405. If so, submit the existing traffic conditions and LOS for I-405 and construction LOS for I-405.

## **CONSTRUCTION TRAFFIC DISTRIBUTION AND SHUTTLE ROUTES BACKGROUND**

The AFC Traffic and Transportation analysis identifies the following distribution of construction traffic over the study area network:

- 33 percent of trips would come from Long Beach and communities located northwest of the HBEP site;
- 33 percent would come from Garden Grove, Anaheim, and communities located to the north of the HBEP site and;
- 33 percent would come from Irvine and communities located southeast of the HBEP site (Page 5.12-16).

In addition to the personal vehicles of the construction workers, shuttle buses would likely be used to transport the construction workers between the parking areas and HBEP site. The discussion of parking impacts and these shuttle routes is provided in Section 5.12.2.6. Approximately 72 shuttle trips per work day (13 round trips from both the City of Huntington Beach parking site and the parking site located at the corner of PCH and Beach Boulevard, and 10 round trips from the All American Tank Farm parking site) are proposed to and from three of the off-site parking areas (Page 5.12-19).

### **DATA REQUESTS**

51. Please remedy the construction traffic distribution percentages identified above to reflect a 100 percent traffic distribution for the study area network.



52. Please provide the construction worker traffic routes to the HBEP site. Would the construction traffic utilize I-405, State Route 55 or State Route 73?
53. Please provide a figure depicting the project trip distribution from the communities located northwest, north and southeast of the HBEP site.
54. Please include the shuttle trips in AFC Table 5.12-6 – Construction Trip Generation Estimate and discuss any traffic impacts and proposed mitigation.

## **DEMOLITION ACTIVITIES BACKGROUND**

Construction of HBEP would require the removal of the existing Huntington Beach Generating Station Units 1, 2, and 5. Demolition of Unit 5, scheduled to occur between the fourth quarter of 2014 and the end of 2015, would provide adequate space for the construction of HBEP Block 1. Construction of Blocks 1 and 2 are each expected to take approximately 42 and 30 months, respectively, with Block 1 construction scheduled to occur from the first quarter of 2015 through the second quarter of 2018, and Block 2 construction scheduled to occur from the first quarter of 2018 through the second quarter of 2020. Removal/demolition of existing Huntington Beach Generating Station Units 1 and 2 is scheduled to occur from the fourth quarter of 2020 through the third quarter of 2022 (Page 1-2).

During peak demolition activities at the site, an estimated maximum of 15 tractor-trailer units would leave the site each day to transport waste and debris offsite for salvage, recycling or disposal. It is anticipated that the maximum number of demolition personnel during any specific demolition activity would be approximately 50, with an overall average demolition workforce of 40 personnel (Page 2-36).

## **DATA REQUESTS**

55. Please clarify if the 15-tractor trailer units are identified in the Delivery/Haul Trucks ADT as stated in AFC Table 5.12-6- Construction Trip Generation Estimate? If not, please include these trips and discuss any traffic impacts and proposed mitigation.
56. Please clarify if the 50 demolition personnel are identified in the Worker counts as stated in AFC Table 5.12-6- Construction Trip Generation Estimate? If not, please update Table 5.12-6 to reflect these construction personnel and discuss any traffic impacts and proposed mitigation.

## **PEAK CONSTRUCTION MONTH BACKGROUND**

The AFC Traffic and Transportation analysis states that during the peak construction month for HBEP, construction would require up to 331 workers (Page 5.12-15). However, Section 5.10 – Socioeconomics – states construction personnel would peak at approximately 236 workers in months 82 and 83 of the HBEP construction and

demolition period. Average workforce over the 90-month HBEP construction and demolition period would be 192 workers (Page 5.10-9).

## **DATA REQUEST**

57. Please clarify the peak construction month(s) and peak construction workers for both the demolition and construction periods.

## **CONSTRUCTION PARKING AREAS BACKGROUND**

The AFC Traffic and Transportation analysis states that construction worker parking for HBEP and the demolition of the existing units at the Huntington Beach Generating Station would be provided by a combination of onsite and offsite parking. Construction/demolition worker parking would be provided at the following locations:

- Approximately 1.5 acres onsite at the Huntington Beach Generating Station (approximately 130 parking spaces);
- Approximately 3 acres of existing paved/graveled parking located adjacent to HBEP across Newland Street (approximately 300 parking spaces);
- Approximately 2.5 acres of existing paved parking located at the corner of Pacific Coast Highway and Beach Boulevard (approximately 215 parking spaces);
- Approximately 225 parking spaces at the City of Huntington Beach shore parking west of the project site and;
- Approximately 1.9 acres at the Plains All American Tank Farm located on Magnolia Street (approximately 170 parking spaces) (Page 5.12-2 and Figure 5.12-4).

In addition, the Applicant submitted a letter dated March 16, 2012, from the City of Huntington Beach approving parking for up to 225 personal vehicle spaces within the City's South Beach Parking Lot for HBEP (Appendix 5.12D).

## **DATA REQUEST**

58. To determine the feasibility of the applicant's parking proposal, please submit documentation allowing construction worker parking at the three other private off-site parking areas.

**Technical Area:** Transmission System Engineering  
**Author:** Laiping Ng  
**Technical Senior:** Mark Hesters

## **BACKGROUND**

The California Environmental Quality Act (CEQA) requires the identification and description of the “Direct and indirect significant effects of the project on the environment.” The Application for Certification requires discussion of the “energy resource impacts which may result from the construction or operation of the power plant.” For the identification of impacts on the transmission system resources and the indirect or downstream transmission impacts, staff relies on the Phase I and Phase II Interconnection Studies for insuring the interconnecting grid meets the California Independent System Operator (California ISO) reliability standards. The studies analyze the effect of the proposed project on the ability of the transmission network to meet reliability standards. When the studies determine that the project will cause a violation of reliability standards, the potential mitigation or upgrades required to bring the system into compliance are identified. The mitigation measures often include the construction of downstream transmission facilities. CEQA requires the analysis of any downstream facilities for potential indirect impacts of the proposed project. Without a complete Phase I or Phase II Interconnection Study, staff is not able to fulfill the CEQA requirement to identify the indirect effects of the proposed project.

## **DATA REQUEST**

Staff requests a complete Phase I and/or Phase II Interconnection Study of the proposed 939 MW Huntington Beach Energy Project (HBEP) to proceed with the preliminary staff analysis.

59. Provide the California ISO Phase I and/or Phase II Interconnection Study of the proposed 939 MW HBEP to the California ISO control grid. The Study should analyze the system impacts with and without the project during peak and off-peak system conditions, and demonstrate conformance or non-conformance with the utility reliability and planning criteria with the following provisions:
  - a. Identify major assumptions in the base cases including imports to the system, major generation and load changes in the system and queue generation.
  - b. Analyze the system for N-0, important N-1 and critical N-2 contingency conditions and provide a list of criteria violations in a table showing the loadings before and after adding the new generation.
  - c. Analyze Short circuit duties.
  - d. Analyze system for Transient Stability and Post-transient voltage conditions under critical N-1 and N-2 contingencies, and provide related plots, switching data and a list for voltage violations in the studies.
  - e. Provide a list of contingencies evaluated for each study.
  - f. List mitigation measures considered and those selected for all criteria violations.
  - g. Provide electronic copies of \*.sav and \*.drw PSLF files.

- h. Provide power flow diagrams (**MW, % loading & P. U. voltage**) for base cases with and without the project. Power flow diagrams must also be provided for all N-0, N-1 and N-2 studies where overloads or voltage violations appear. Provide the pre and post project diagrams only for an elements largest overload.

**Technical Area:** Visual Resources  
**Author:** Jeanine Hinde

## **BACKGROUND**

Information is needed to augment the information presented in Table 5.13-1 and Figure 2.1-2 of the application for certification (AFC). Table 5.13-1 in the "Visual Resources" section of the AFC shows the approximate dimensions and proposed surface treatments for major project features for the Huntington Beach Energy Project (HBEP). In comparing the information in the table to Figure 2.1-1 in the AFC, "General Arrangement/Site Plan," staff observes that stated dimensions are inconsistent for a few project structures. Staff also notes that no information is provided in Table 5.13-1 stating how many structures are proposed and which ones would be unique to the proposed project. Of the project features listed in Table 5.13-1, seven are listed as "existing." It is not clear if those structures would be replaced by new structures with the same or similar functions or if the structures listed as existing would be retained and refurbished for HBEP.

## **DATA REQUESTS**

60. For each project feature listed in Table 5.13-1, please indicate the quantity and whether it would be erected in both power blocks, the existing electrical switchyard, or in a common area. Although Figure 2.1-1 provides some information (e.g., three combustion turbines in each power block), it does not clearly provide all of the information needed to evaluate the proposed changes to visual resources conditions. (For example, based on Figure 2.1-1, it is not clear how many 135-foot transmission structures would be constructed.)
61. For structures listed in Table 5.13-1 as "existing," please note whether those structures are existing project features that would be retained and refurbished under the proposed project.
62. Table 5.13-1 lists the "CO<sub>2</sub> F/F (LP tank)" as 55 feet long and 40 feet wide. That feature is listed in Figure 2.1-1 as 20 feet long and 15 feet wide. Please clarify the discrepancy.
63. Table 5.13-1 and Figure 2.1-1 list the proposed air-cooled condenser (ACC) as 209 feet tall. Figure 2.1-2a shows the ACC as 104 feet tall. Based on staff's review of Figure 2.1-2a and the visual simulations in the AFC, the ACC is approximately the same height as the combustion gas turbine. Please correct the height dimension for the ACC.
64. Table 5.13-1 lists the "stack" as 65 feet tall. Figure 2.1-1 does not list stack height. Under subsection 5.13.5.4 of the AFC, it states that the stacks for HBEP Blocks 1 and 2 would be approximately 120 feet tall. Please correct and clarify the discrepancy.
65. Table 5.13-1 lists the "new control/administration building" and the "new maintenance/warehouse building." On Figure 2.1-1, those features are labeled, "future." Please clarify when those structures would be constructed relative to the proposed construction schedules for Power Blocks 1 and 2.

## **BACKGROUND**

Subsection 5.13.2.3.5 of the AFC, "Lighting," briefly and generally refers to the "limited times during the construction/commissioning period when the project site may appear as a brightly lit area as seen in close view and from distant hillside residential areas." Staff observes that the proposed construction periods for HBEP would begin in late 2014 with the demolition of Unit 5 and continue through construction of Power Blocks 1 and 2, which would finish in mid 2020. Demolition and removal of Units 1 and 2 would begin in late 2020 and finish by mid to late 2022. Construction of HBEP could occur continuously over approximately 8 years. Staff presumes that much of the construction work would require tall, lighted cranes and other support structures. Construction could extend to several hours after dark during 4–5 months of the year.

Subsection 5.13.2.4.6 of the AFC, "Light and Glare," states that "[t]he lighting associated with HBEP will not substantially exceed, and may represent a slight decrease in the lighting used on the existing Huntington Beach Generating Station." It is not clear from the brief discussion and analysis how lighting could potentially be decreased with construction and operation of the proposed project.

## **DATA REQUESTS**

66. Please provide information on the expected types and heights of project construction equipment, including cranes and tall scaffolding, etc. Provide approximate time periods (e.g., the number of continuous months during a construction year) when tall lighted structures would be used at the site. Please indicate what structures would require continuous lighting during project construction. Please describe any time periods when construction activities would be less visible.
67. Please provide additional analysis to substantiate how lighting could potentially be decreased with construction and operation of HBEP.

## **BACKGROUND**

The visual resources analysis in the AFC describes five key observation points (KOPs), which are mapped on Figures 5.13-1a and 5.13-1b of the AFC. In addition to the KOPs, these two figures show four other viewpoints, which are labeled as VP 1 through VP 4. Figures 5.13-2, 5.13-3, and 5.13-4 provide five photographs of off-site construction laydown and parking areas. It is not clear if the photographs correspond to the viewpoints on the two figures.

## **DATA REQUEST**

68. Please provide information on the meaning of the four viewpoints on Figures 5.13-1a and 5.13-1b. Please clarify whether and how those viewpoints correspond to the photographs of off-site construction laydown and parking areas.

**Technical Area:** Waste Management  
**Author:** Ellie Townsend-Hough, REA

## **BACKGROUND**

The Huntington Beach Energy Project is proposed to be built on a site currently occupied by the AES Huntington Beach Generation Station (HBGS). Demolition of existing facilities for the new project development will generate significant hazardous wastes including asbestos debris, oily debris, heavy metal dust, paint thinners and solvents and used lubricating oil. In addition, the HBGS has plugged oil and gas wells, aboveground storage tanks, degreasing pits, two retention basins and five generating units that are sources of contamination. The extent of contamination is not currently defined. The site will need soil sampling, characterization, and possibly remediation which will require coordination with the Energy Commission, the Department of Toxic Substance Control and possibly the Regional Water Quality Control Board. Staff experience suggests that coordination with these agencies to ensure the site is appropriately characterized and remediated could impact the project schedule.

## **DATA REQUESTS**

69. What type of discussions, investigations and/or remediation activities has the applicant entered into with DTSC concerning potential contamination of various areas of the generating station (i.e. aboveground storage tanks, degreasing pits, number 4 auxiliary transformer area, primary fuel pumping area, etc.)?
70. If cleanup of areas with high concentrations of contamination is required, how long would remediation take and would the remediation be completed prior to the Huntington Beach Energy Project construction?
71. Please provide an estimate of the amount of asbestos that will be disposed of from the demolition of the HBGS project.

**Technical Area:** Worker Safety and Fire Protection  
**Author:** Geoff Lesh

## **BACKGROUND**

Huntington Beach Energy Project (HBEP) will add a large scale industrial facility into the jurisdiction of the City of Huntington Beach Fire Department (HBFD). First responder and fire protection services will be required for the project and will be provided by HBFD Fire Station 4. Construction and operation of the project will increase the assets that the fire department must protect and potentially increase call frequency for emergency first aid and medical services. Energy Commission staff requires assurance that after applying any proposed mitigations, the fire department's increased responsibility will not adversely affect to a significant extent its ability to continue providing service to the public.

## **DATA REQUEST**

72. Please provide a letter, email, or record of conversation with HBFD that confirms the absence of any expected impacts on the local fire district resulting from construction and operation of the proposed project, or identifies impacts and the needed mitigation to address such impacts to the satisfaction of the HBFD.

Or, in the absence of such letter or communication, please provide a Fire and Emergency Services Risk Assessment and a Fire Protection and Emergency Services Needs Assessment for the construction and operation of the project that provides an objective estimate of both equipment and staffing shortfalls (if any) and the associated recommended mitigations (if any) that would be required by HBFD to maintain its current level of readiness to respond to the public.

The Fire and Emergency Services Risk Assessment and a Fire Protection and Emergency Services Needs Assessment should be considerate of the guidance provided by NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments and by NFPA 551: Guide for the Evaluation of Fire Risk Assessments. The Fire Protection and Emergency Services Needs Assessment should address emergency fire and medical response equipment, staffing, and location needs, while the Risk Assessment should be used to establish the risk (chances) of significant impacts occurring. The Fire Protection and Emergency Services Needs Assessment and Risk Assessment should evaluate the following: (a) the risk of impact on the local population that could result from potential unmitigated impacts on local fire protection and emergency services (i.e. "drawdown" of emergency response resources, extended response times, etc.) and (b) recommend an amount of funding that should be provided and used to mitigate any identified impacts on local fire protection and emergency medical response services.



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September 24, 2012

Felicia Miller, Project Manager  
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VIA EMAIL: [Felicia.Miller@energy.ca.gov](mailto:Felicia.Miller@energy.ca.gov)

RE: Initial Data Requests for Application for Certification (AFC) 2012-AFC-02 – AES  
Huntington Beach Energy Project

Dear Ms. Miller:

Thank you for this opportunity to provide our initial data requests on the above-referenced AFC application. As you know, the Coastal Commission's role in the California Energy Commission's (CEC) AFC proceedings is to review power plant proposals in the coastal zone and to provide for the CEC the Coastal Commission's findings with respect to the proposed project's conformity to relevant provisions of the Coastal Act and the certified Local Coastal Program (LCP), which in this case, is that of the City of Huntington Beach. This letter provides several initial requests for data we will need to conduct the necessary review pursuant to the role prescribed by Section 25523(b) of the Warren-Alquist Act, Section 30413(d) of the Coastal Act, and as described in the May 2005 Memorandum of Agreement between the CEC and Coastal Commission. Please note that we will provide requests for additional data, including some needed to determine LCP conformity, later in the AFC process.

**General comment – need for comprehensive assessment:** Most of these initial requests refer to some of the concerns and requests raised in our August 3, 2012 letter regarding completeness of the AFC application that were not adequately addressed during that stage of the review. As we noted previously, many of our concerns and requests are interrelated – for example, our concern about potential noise impacts to nearby breeding and nesting bird species is related to our request for information about potential alternative facility layouts that may reduce those noise-related impacts. Similarly, data provided in response to our requests about geologic hazards could result in various facility components being sited in different locations than currently proposed. We therefore request AES address the information requests below both specifically and comprehensively.

**Known and potential effects on biological resources:**

- **Onsite wetlands:** As noted in our previous letter, we expect to obtain information about the proposed project's potential wetland effects as part of an ongoing investigation into clearing and grading in an area of the AES site with wetland characteristics. We will provide any relevant information obtained later in the AFC review.
- **Adjacent wetlands, environmentally sensitive habitat, and associated species:** We concur with the data requests identified in the September 10, 2012 letter from the U.S. Fish and Wildlife Service, which involve potential biological resource impacts to nearby species due to several aspects of project construction and operations – e.g., noise, dust, lighting, etc. – and we incorporate those requests by reference.

**Known and potential effects due to geologic hazards:** The power plant site has several known geologic hazards, several of which were recently identified in the 2010 Supplemental EIR for the proposed Poseidon desalination facility at the site. According to the AFC application and EIR, the site has a fault running directly beneath it, has the potential for surface rupture, could experience ground motions greater than 1g, has corrosive soils, and could experience liquefaction, lateral spread, and subsidence resulting from seismic events. The site is also within a tsunami runup zone that extends some distance inland. Any of these site characteristics could affect project feasibility, require project components be relocated, or could result in significant adverse effects on coastal resources. We therefore request that AES provide detailed, site-specific information describing the type and extent of this suite of geologic hazards and the mitigation measures it will include as part of the project to avoid and minimize the adverse effects of these hazards. Information provided should also describe how these hazards affect the proposed layout of project components and any feasible alternative layouts that might avoid or reduce potential impacts of these hazards. The studies conducted and information provided should be consistent with that we requested for the proposed desalination project, as described in our July 13, 2012 letter to Poseidon that we attached to our previous AFC review correspondence.

**Known and potential cumulative impacts:** The AFC application briefly mentions the desalination facility being proposed within the power plant boundary, but does not include sufficient information about likely or potential cumulative impacts that could occur during concurrent construction and operation of the power plant and desalination projects, as well as another project – construction of a City of Huntington Beach reservoir – that is proposed for the site. The combined project schedules, locations of project components, and interactions among the three proposals could result in substantial cumulative impacts, which need to be identified and assessed during the AFC process. For example, the power plant project proposes to use up to several hundred offsite public parking spaces during the several years of project construction, and use of these spaces would adversely affect public access to the shoreline. However, if areas within the power plant site now set aside for the desalination facility or reservoir are available during all or part of the power plant construction, the adverse public access effects associated with the proposed offsite parking could largely be eliminated.

We request that the applicant provide detailed proposed layouts and schedules for the three proposed projects and identify potential modifications to those layouts and schedules that could avoid or reduce potential individual and cumulative impacts to coastal resources, including impacts to biological resources, public access, and those associated with geologic hazards.

**Alternative site layouts and locations for project components:** As noted previously, the entire AES site has been designated by the Energy and Coastal Commissions as suitable for power plant expansion; however, the current proposal would use only about half the available expansion area and would move a number of the proposed project's construction-related activities to offsite locations. Some of these offsite activities would result in greater adverse impacts to coastal resources than would locating the activities within the AES site – for example, the proposal to use for several months more than 200 public parking spaces near the beach would adversely affect public access to the shoreline.

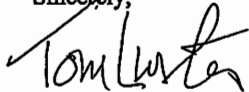
Similarly, it appears that using the full area available within the AES site may allow for alternative configurations of the power plant components that could substantially reduce identified or potential coastal resource impacts. As noted in our previous letter, the proposed expansion would place relatively high noise-generating power plant components adjacent to sensitive wetlands known to provide breeding and nesting habitat for sensitive species. Some or all of these components might instead be located within the AES site boundary but further from these habitat areas. Similarly, conclusions from the above-requested geologic hazards studies could result in the need for some project components to be sited elsewhere.

We therefore request that AES describe opportunities to site any or all of the currently proposed offsite project components within its site. We also request that AES describe its legal interests in, and site control of, the full power plant site boundary (e.g., existing or proposed land ownership, leases, or easements for the proposed projects, easements for other components such as the onsite substation, etc.) that would illustrate potential alternative layouts that might fully or partially mitigate these impacts.

#### **Closing**

Thank you for the opportunity to comment. We look forward to working with the CEC on this project. Please feel free to contact me at 415-904-5248 or [tluster@coastal.ca.gov](mailto:tluster@coastal.ca.gov) if you have questions.

Sincerely,



Tom Luster  
Staff Environmental Scientist  
Energy, Ocean Resources, and Federal Consistency Division



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT  
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1516 NINTH STREET, SACRAMENTO, CA 95814  
1-800-822-6228 – [WWW.ENERGY.CA.GOV](http://WWW.ENERGY.CA.GOV)**

***APPLICATION FOR CERTIFICATION FOR THE  
HUNTINGTON BEACH ENERGY PROJECT***

**Docket No. 12-AFC-02  
(Revised 9/17/12)**

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\*indicates change

### DECLARATION OF SERVICE

I, Diane L. Scott, declare that on October 2, 2012, I served and filed a copy of the attached **STAFF'S DATA REQUESTS, 1 through 72, and COASTAL COMMISSION DATA REQUEST FOR THE PROPOSED HUNTINGTON BEACH ENERGY PROJECT (12-AFC-02)** dated October 2, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at:  
[http://www.energy.ca.gov/sitingcases/huntington\\_beach\\_energy/index.html](http://www.energy.ca.gov/sitingcases/huntington_beach_energy/index.html).

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

*(Check all that Apply)*

For service to all other parties:

- ☒ Served electronically to all e-mail addresses on the Proof of Service list;
- ☐ Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses marked **\*"hard copy required"** or where no e-mail address is provided.

**AND**

For filing with the Docket Unit at the Energy Commission:

- ☒ by sending one electronic copy to the e-mail address below (preferred method); **OR**
- ☐ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

**CALIFORNIA ENERGY COMMISSION – DOCKET UNIT**

Attn: Docket No. 12-AFC-02  
1516 Ninth Street, MS-4  
Sacramento, CA 95814-5512  
[docket@energy.ca.gov](mailto:docket@energy.ca.gov)

***OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:***

- ☐ Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission  
Michael J. Levy, Chief Counsel  
1516 Ninth Street MS-14  
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I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

**Originally Signed By:**

Diane L. Scott  
Siting, Transmission and Environmental Protection Division